

PRODUCT INFORMATION

Nimustine (hydrochloride)

Item No. 31464

CAS Registry No.: 55661-38-6

Formal Name: N'-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-N-(2-chloroethyl)-N-nitroso-urea, monohydrochloride

Synonyms: ACNU, NSC D 245382

MF: $C_9H_{13}ClN_6O_2 \cdot HCl$

FW: 309.2

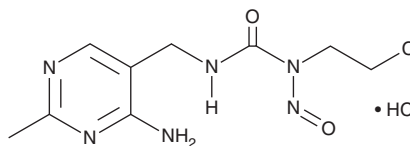
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 249 nm

Supplied as: A solid

Storage: $-20^\circ C$

Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Nimustine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the nimustine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Nimustine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of nimustine (hydrochloride) in these solvents is approximately 0.2, 20, and 1 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of nimustine (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of nimustine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Nimustine is a pyrimidine analog and nitrosourea alkylating agent with anticancer activity.¹⁻³ It inhibits the growth of U-251MG and EA285 glioma cells when used at a concentration of 10 $\mu g/ml$.² Nimustine (30 mg/kg) increases the median survival time in a Walker 256 carcinoma rat model of metastatic brain tumors.³

References

1. Heal, J.M., Fox, P.L., and Schein, P.S. A structure-activity study of seven new water soluble nitrosoureas. *Biochem. Pharmacol.* **28**(8), 1301-1306 (1978).
2. Yoshida, J., Shibuya, N., Kobayashi, T., et al. Sensitivity to l-(4-amino-2-methyl-5-pyrimidinyl)methyl-3-(2-chloroethyl)-3-nitrosourea hydrochloride (ACNU) of glioma cells in vivo and in vitro. *Cancer* **50**(3), 410-418 (1982).
3. Hasegawa, H., Shapiro, W.R., and Posner, J.B. Chemotherapy of experimental metastatic brain tumors in female Wistar rats. *Cancer Res.* **39**(7 Pt 1), 2691-2697 (1979).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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